LONGINES

Press release | June 2022

The rebirth of a high-frequency icon: The new LONGINES ULTRA-CHRON

Longines is launching a new model that is more accurate than a chronometer: The new LONGINES ULTRA-CHRON, ticking at 10 beats a second. The new high-frequency movement guarantees higher precision and profits from Longines' rich heritage of producing high-beat movements for over 100 years. Inspired by the original Longines Ultra-Chron Diver of 1968, the new model reflects the iconic design codes of its ancestor and is highly resistant to shocks, scratches and water pressure.

In 1968, Longines launched the Ultra-Chron Diver, the first dive watch to be equipped with a high-frequency movement. At the time, Longines had already established itself as a pioneer in high-frequency technology. In fact, the winged hourglass brand created its first high-frequency timekeeping device to measure precisely 1/10th of a second as early as in 1914. In 1959, Longines developed the first high-beat movement for a wristwatch, an observatory chronometer that set new records in terms of accuracy.

The new Longines Ultra-Chron is inspired by the aesthetic codes as well as the professional dive features of the 1968 model. It features a unidirectional rotating bezel as well as a screwed-in caseback and crown. It also offers great legibility and is water resistant to 30 bar (300 meters).

The Longines Ultra-Chron's instantly recognizable 43mm cushion-shaped steel case is fitted with a diving bezel that boasts a sapphire insert with luminescent accents. The eye-catching black grained dial features a white minute track with alternating Super-LumiNova®-coated batons and rhodium plated appliques.

The original Ultra-Chron logo is proudly applied on the dial and embossed on the caseback. The new Longines Ultra-Chron has a distinctive red minute hand which, like the hour hand, is coated with Super-LumiNova® for optimal legibility.

At the heart of the new Longines Ultra-Chron is the calibre L836.6, a high-frequency "in house" movement. A watch is referred to as "high-frequency" when it is fitted with a movement whose balance-spring oscillates at 36,000 beats per hour (10 beats every second). These movements, which Longines pioneered in 1914 (to time 1/10th of a second) and 1916 (to time 1/100th of a second), improved precise timekeeping. From 1959 onwards, Longines made use of the high-beat-movements to increase the accuracy of its watches. Thanks to a reduction of the disruptive effects of shocks or of changes in the position of the movement, the high-beat movement proves to be more stable.

The accuracy of the Longines Ultra-Chron is confirmed by its certification as an "ultra chronometer" by TIMELAB, an independent testing laboratory in Geneva. This designation goes beyond the usual "chronometer" certification. The "ultra-chronometer" qualification process tests the watch head and subjects the finished product to a 15-day testing period during which the watch is submitted to a series of tests at three temperatures, 8°C, 23° C and 38°C, confirming that it meets the strict precision criteria (ISO 3159:2009 standard).

The Longines Ultra-Chron is available with a choice of a leather strap or a steel bracelet and it is delivered in a special presentation box containing a black NATO strap crafted from recycled material.

The new Longines Ultra-Chron will evoke an emotional response from any watch aficionado who is passionate about the iconic timepieces from one of watchmaking's most innovative eras. It will also win over new enthusiasts who will be thrilled to wear a bit of horological history on their wrists.

About our movements

With centuries of watchmaking expertise, Longines has played a pioneering role in a number of technological advances and continues to display an unwavering commitment to innovation. Its constant pursuit of excellence has, in turn, led it to equip all of its automatic timepieces with state-of-the-art movements which, notably, include a silicon balance-spring. This material is not only light and corrosion-resistant but also remains unaffected by normal temperature variations and magnetic fields. Its unique properties improve the precision and longevity of the watch and allow Longines to provide these models with a 5-year warranty.

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The History of high-frequency watches made by Longines

More than 100 years of experience in manufacturing high-frequency timepieces has made Longines the leading expert on professional timekeeping and in sports watches. The fast-beating movements are capable of measuring 1/10th or 1/100th of a second. In addition, they have proven to be extremely accurate. Over time, Longines has built a wide variety of high-beat stopwatches, chronographs and chronometers.

1914: Stopwatch with 5 Hz high-frequency movement and split-second hand [CAL. 19.73N]

As early as 1914, Longines used high-frequency movements in its handheld stopwatches for the timekeeping of sporting events to measure 1/10th of a second. Driven by the calibre 19.73N with a balance wheel oscillating at 36,000 beats per hour, this chronograph proved very successful in sports, military and medicine. The model pictured was equipped with a split-second hand, a modification that Longines introduced in 1922. To improve the reading of 1/10th of a second, the chronograph hand rotates once around the dial in 30 seconds. The 15-minute counter is placed on the auxiliary dial near 12 o'clock.

1916: Stopwatch with 50 Hz high-frequency movement to measure 1/100th of a second [CAL. 19.73N]

In 1916, Longines was capable of measuring 1/100th of a second. Based on the modified calibre 19.73N, the engineers in Saint-Imier enhanced the speed of the balance to a rate of 360,000 beats per hour – and thus enabled the exact reading of 1/100th of a second. To achieve this, the chronograph hand flew over the dial in just three seconds to its starting position. The scale on the periphery of the dial was divided into very small steps of 1/100th of a second. An instantaneous minute counter was placed at 12 o'clock and could measure up to three minutes.

1938: High-frequency skiing timer (5 Hz) with split-second hand [CAL. 24 LINES]

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As sporting events became more important, Longines was appointed Official Timekeeper on numerous occasions. In 1938, it developed a larger and more accurate movement: the 24 lines. This chronograph was constructed on the basis of a navigational chronometer (cal. 24.99). The timer for ski races pictured here (from 1939) ticked at 36,000 beats per hour to measure 1/10th of a second. The chronograph hand made one rotation in 30 seconds, which helped read the fractions of a second. Equipped with a second split-second hand and a 30-minute recorder, this professional stopwatch with three pushers was encased in Staybrite steel. The movement was adjusted to three positions and gained special notice at the Observatory of Neuchâtel for its high accuracy. Longines built a variant of this calibre to measure 1/100th of a second.

1957: Professional high-beat and split-second chronograph to time 1/10th of a second [CAL. 260]

To improve the 24-line calibre of 1938, Longines launched a chronograph of the same size in 1957 with a 30-minute counter and a system of stopping the balance. This professional instrument still had a minute and hour hand, but was also able to measure 1/10th of a second thanks to its high-frequency movement (36,000 vibrations per hour). It was equipped with a flyback function and a split-second hand. The pictured model from 1966 has a special chronograph hand with a so-called nonius-scale: at its extremity there is a rack with nine “teeth” that indicate the end of the hand. When the hand is stopped, one of the “teeth” stops exactly in line with one of the “seconds” marks around the dial. The number at the base of this “tooth” indicates the number of tenths of a second.

1959: First high-frequency wristwatch Observatory Chronometer [CAL. 360]

In the 1950s, Longines was convinced that there was a need to increase the scientific efforts to maintain its competitive edge. Following the technical drawings of August 1958, Longines was ready to present the first high-frequency movement for a wristwatch in 1959: the calibre 360, oscillating at 36,000 beats per hour, handmade and fine-tuned for Observatory Chronometer Competitions. This technical milestone was built in a series of 200 pieces from 1959 to 1963. The rectangular movement improved the accuracy considerably, and it took first and second place in the accuracy competition at the Observatory of Neuchâtel in 1961 and the following year, claimed first, second and third places. The daily deviation was around or below 1/10th of a second.

1966: Ultra-Chron, the accurate high-beat wristwatch [CAL. 431]

In the 1960s, Longines' engineers worked on a mechanical movement that matched the accuracy of the new electronic watches. Thanks to their experience in timekeeping and in Observatory Chronometers, they knew that high-frequency watches were more consistent between the vertical and horizontal positions and suffered less drop in amplitude over a day, making them more accurate. The obstacles were lower power reserve and lubrication problems. Longines found the solution in the calibre 431 (with patented dry lubrication) and guaranteed an amazing accuracy of one minute a month, or two seconds a day. Being far more accurate than a chronometer certified by the COSC (Contrôle Officiel Suisse des Chronomètres), the model was named Ultra-Chron. Longines registered the name in October 1966. The first Ultra-Chrons were sold in the United States in December 1966.

1968: Ultra-Chron Diver, the first high-beat watch under water [CAL. 431]

In 1967, Longines drew a sporty version of the Ultra-Chron: a diver's watch with a bright-red minute hand, water-resistant to 200 metres. In early 1968, it was the first high-frequency diving watch, and probably the most accurate, driven by the unique calibre 431. As with all the Ultra-Chron models, Longines guaranteed an accuracy of one minute a month, which converts to two seconds a day. The tonneau-shaped watch was fitted with a calendar mechanism and a turning bezel, which enabled divers to determine their immersion times. To ensure legibility, even in murky water, the index marks on the dial hand, the triangle on the bezel and even the tip of the seconds hand (in the first series) were filled with tritium.

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The timing of sports events with high-frequency instruments made by Longines

Thanks to its highly accurate and reliable timepieces, Longines was requested to time the most important and prestigious sports events all over the world. Up to this day, this honourable task has motivated Longines to improve the precision and accuracy of its watches and to develop ever better timing equipment.

Equestrian sports

As early as 1878, Longines had developed its first chronograph movement, which was soon fitted in a case engraved with a jockey and his horse. These stopwatches were seen on the American racetracks in the 1880s, where they proved very popular among jockeys as well as the people attending the races. In 1912, a new step was taken when Longines entered into its first official partnership with a show jumping event in Lisbon, Portugal. Throughout the years, Longines has timed thousands of equestrian competitions. To measure the closely-spaced competitors, the brand from Saint-Imier produced stopwatches with split-second hands as well as high-frequency movements accurate to 1/10th or 1/100th of a second. As a result of its legacy and expertise, Longines' involvement in equestrian sports today includes show jumping, dressage, and flat racing disciplines.

Alpine skiing

Skiing down snowy mountains ranks among the most popular sports in Longines' home country of Switzerland. In 1924, the brand timed the "International Week of Winter Sports" in Chamonix (France). Some years later, the stopwatches from Saint-Imier were timing the World Ski Championships at the same place. In 1939, Longines presented a skiing timer with a high-beat movement and split-second hand, measuring 1/10th of a second. For the Military Ski Championships in Crans-Montana (Switzerland) in 1945, Longines introduced a photocell light barrier on the finish line. In 1948, Longines was selected to time the legendary Kandahar downhill race in Sankt Anton (Austria). The organisers of the Ski World Championships of 1950 in Aspen (USA) chose Longines to be the Official Timekeeper. Today, Longines is the Official Partner and official Timekeeper of the FIS Alpine Ski World Cup tour and the FIS AlpineWorld Ski Championships and continues to time the most famous ski races in the FIS Alpine Ski World Cup, including, among many others, the downhill races in Kitzbühel (Austria) or Lauberhorn-Wengen (Switzerland).

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International Rallye-Sport

In January 1949, cars from all over Europe participated in the first edition of the Rallye Monte-Carlo after World War II. Timekeeping was entrusted to Longines, a status it held for more than 30 years. In 1955, the brand from Saint-Imier launched a special punch printing device, called Printogines. Equipped with a clock with an 8-day power reserve, it allowed contestants to punch their own control card at each checkpoint over the more than 5,000 km distance. The reliable and robust device determined the official winning times on the basis of the drivers' recorded passages through all checkpoints. It was so useful that it was appointed to time all the famous rallies of its period – including the Coupe des Alpes, the RAC Rally of Great Britain, the TAP Rally in Portugal, and the Thousand Lakes in Finland as well as the Rallye Acropolis in Greece and the Rallye de Côte d'Ivoire in Africa.

Cycling races

In 1951, Longines was asked to time the world's leading cycling event, the Tour de France. The race across France was an excellent opportunity to test a new system that combined a camera at the finish line with a device recording each contestant's time on film. This timing system solved the photo-finish problem when closely grouped competitors reached the line at nearly the same time. The former president of the French Cycling Federation, Jean Pitallier, personally timed every edition of the Tour de France from 1973 to 1980 with a pair of Longines high-frequency split-second stopwatches (ref. 7411). Longines was Official Timekeeper of the Tour de France until 1982 but its commitment to cycling went far beyond that: from 1954 until 1988, Longines timed the world track and road championships 28 times – as well as such renowned events as the Giro d'Italia or the Vuelta in Spain.

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Formula 1

In 1949 Longines introduced a timing system for motor races capable of recording 1/10th of a second via a series of photos. It was so convincing that the International Automobile Federation certified it in 1950. In the same year, the inaugural season of Formula 1, Longines timed the famous Grand Prix de Monaco and the Indianapolis 500 in the USA as well as Formula 1 races in Barcelona (Spain), Buenos Aires (Argentina), Spa (Belgium), Zandvoort (The Netherlands), and Bern (Switzerland) along with numerous other racing events in the following years. By 1954, Longines had developed Chronotypogines, which used a sensor to automatically start and stop time. This system was soon adopted by the International Automobile Federation. In 1980, Longines launched (with Olivetti) a new method to time each car independently by using radio waves. This led to Longines' role as Official Timekeeper for all Formula 1 races from 1982 to 1992.

Based in Saint-Imier in Switzerland since 1832, the watchmaking company Longines wields expertise steeped in tradition, elegance and performance. With generations of experience as official timekeeper of world championships, and as partner of international sports federations, Longines has built strong and long-lasting relationships in the world of sport over the years. Known for the elegance of its timepieces, Longines is a member of Swatch Group Ltd., the world's leading watch manufacturer. The Longines brand, with its winged hourglass emblem, is established in over 150 countries.

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